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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,760	12/14/2001	Young C. Ko	KCC-17,473	8158

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PAULEY PETERSEN KINNE & ERICKSON
2800 WEST HIGGINS ROAD
SUITE 365
HOFFMAN ESTATES, IL 60195

EXAMINER	
YAO, SAMCHUAN CUA	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/017,760	KO ET AL.	
	Examiner	Art Unit	
	Sam Chuan C. Yao	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,10-28 and 30-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6,10-28 and 30-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-6, 10-28 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh et al (US 4,892,754) in view of Trokhan et al (US 5,547,747) and either (Anderson et al (US 6,103,061) or Wisneski et al (US 6,533,989)).

With respect to claims 1, 18, and 28, the discussion of the Itoh et al patent is set forth in the prior office actions dated 01-20-04 numbered paragraph 3 and 09-14-03 numbered paragraph 7.

Itoh et al also discloses a preferred particle diameter for a sprayed monomer solution, the particle diameter is around a range of 30-300 microns, and further discloses that a particle diameter of a resultant SAP is around 100-250 microns (col. 6 lines 23-40 and example 5). Although not explicitly disclosed, the particle/mist diameter range for a radical polymerization initiator is taken to be similar to the particle range of a sprayed monomer solution. In any event, it would have been obvious in the art to provide a radical polymerization initiator having a particle diameter range similar to a diameter range of a monomer solution (i.e. 30-300 microns) such as is a typical particle/mist size for a sprayed solution.

Itoh et al does not teach using a non-contact printing process for separately applying a monomer solution and a radical polymerization to a fibrous web. However, it would have been obvious in the art to apply a non-contact printing (i.e. jet-printing) process for separately applying a monomer solution and a radical polymerization to a fibrous web, because: a)Trokhan et al teaches the difficulty of spraying a superabsorbent material to a fiber web in a precise pattern and suggest using a printing method to precisely apply a superabsorbent material to a fiber web (col. 1 line 21 to col. 2 line 23), b) it is a common knowledge in the art to apply a coating/impregnating liquid agent to an absorbent fibrous web using a jet-printing or a spray-printing technique as exemplified in the teachings of either Wisneski et al (col. 11 lines 5-15) or Anderson et al (col. 1 lines 7-11; col. 12 line 66 to col. 13 line 38).

With respect to claims 3-6, 10-17, 19-27 and 30-32, for the same reasons set forth in prior office actions dated 01-20-04 numbered paragraph 3 and 09-14-03 numbered paragraph 7, the limitations in these claims would have been obvious in the art.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 18, and 28 have been considered but are moot in view of the new ground(s) of rejection.

The following brief remarks regarding Counsel's arguments. Counsel argues on page 10 last two paragraphs that Itoh et al teaches uniformly applying solution to a fibrous web. Accordingly, *"... if one applies enough of a solution by spraying,*

uniform coating may result (as opposed to an uneven coating characterized by spaces between microdroplets)." (parenthesis in original). It should be noted that, the claims as presently recited do not require uneven coating of precursor compositions. Equally important, the limitation "*adding ... precursor composition as microdroplets having a diameter of about 10 to about 1000 microns ...*" fails to define over uniformly applying a solution to a fibrous web, wherein the applied solution has a particle diameter range of 30-200 microns as suggested in the process taught by Itoh et al (col. 6 lines 22-40). As for Counsel's arguments that, "*Even if less of the solutions were sprayed, resulting in microdroplets instead of a uniform coating, the microdroplets would be randomly disposed on the substrate.*", Examiner strongly disagrees with Counsel's assertion. Uniform coating and formation of microdroplets are not mutually exclusive from each other. As noted earlier, a uniformly applied solution has a particle diameter range of 30-200 microns. In any event, the modified process of Itoh et al applies solutions to a fibrous web using a jet-printing operation. This operation is reasonably expected to precisely apply solutions to a desired location of a fibrous web. In other words, the radical polymerization radical microdroplets would reasonably be expected to land in substantially the same location as the microdroplets of monomer solution.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571)

272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
04-29-04